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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,396	10/07/2005	Koji Akiyama	MAT-8725US	4763
23122	7590	12/22/2009		
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER HANLEY, BRITT D	
			ART UNIT 2889	PAPER NUMBER
			MAIL DATE 12/22/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,396

Applicant(s)

AKIYAMA ET AL.

Examiner

BRITT D. HANLEY

Art Unit

2889

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

0.1 A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/18/2009 has been entered. Claims 1-14 are pending.

Claim Rejections - 35 USC § 103

0.2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

0.3 The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

0.4 Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinji *et al.* (JP11-213891) in view of Applicant cited Oono (JP3-75596) and Kazuya *et al.* (JP07-162180).

Q.5 Regarding claim 1 and 6, Shinji *et al.* disclose an aging method and device for performing an aging of a plasma display panel (10) using an aging device (1) including an air blowing means (fan, paragraph 23) for cooling a plasma display panel (paragraph 23), the method comprising: cooling the plasma display panel during the aging (paragraph 23). Shinji *et al.* do not explicitly appear to disclose changing at least one of direction or amount of air blown from the air blowing means during the aging process positioning the air blowing means above a front-face surface of the plasma display panel to direct air to the front-face surface in a direction away from parallel relative to the front-face surface.

Q.6 However, in the same field of fan cooling, Oono discloses a fan (6) and an airflow guide (2) that changes the direction of the air to cool a circuit board (3). Further, in the same field of fan cooling, Kazuya *et al.* disclose a plurality of fans (55), some of which are above a front-face surface of the circuit boards (15), that rotated around a parallel surface of a circuit board (paragraph 33, Figures 1 and 2) in order to cool the devices uniformly (paragraph 25). Furthermore, as the fans pivot around shaft (31), the air is directed toward a front-face surface of the circuit board in a direction away from parallel, that is the air has an angle of incidence with the front-face surface of the board.

Q.7 At the time the invention was made, it would have been obvious to a person having ordinary skill in the art having the references of Shinji *et al.*, Oono, and Kazuya *et al.* to modify device of Shinji *et al.* to include the airflow guide of Oono in order to better cool the panel so as to prevent cracks from forming in the panel and to include fans capable of blowing air toward the PDP in directions other than parallel to the surface of the PDP in order to uniformly cool the PDP (paragraph 25, Kazuya *et al.*).

Q.8 Further, optimizing the direction of air flow toward the surface of the PDP is a matter of routine optimization and within the skills of one having ordinary skill in the art. Further yet, one of ordinary skill in the art would positioning the air blowing means above a front-face surface of the plasma display panel to direct air to the front-face surface in a direction away from parallel relative to the front-face surface in order to uniformly cool the PDP. When air is blown toward the front-face surface of the PDP in a perpendicular direction, air is able to cool all sides of components on the PDP, and the air that cools the panel is at the same temperature (as opposed to air that has been blown parallel and heated by the panel as it travels across the PDP).

~~0.9~~ Regarding claims 2 and 7, the combination of Shinji *et al.*, Oono, and Kazuya *et al.* disclose the method and device of claims 1 and 6, wherein the air blowing means includes a plurality of air blowing devices (27, paragraph 33, Kazuya *et al.*), and an air blowing amount of at least one of the plurality of air blowing devices is changed (Drawing 2, blown density is controlled, Oono). At the time the invention was made, it would have been obvious to a person having ordinary skill in the art having the references of Shinji *et al.*, Oono, and Kazuya *et al.* to include a plurality of fans and in order to better cool the panel so as to prevent cracks from forming in the panel.

~~1.0~~ Regarding claims 3 and 8, the combination of Shinji *et al.*, Oono, and Kazuya *et al.* disclose the aging method and device of a plasma display panel according to claims 1 and 6, wherein the air blowing means includes a plurality air blowing device (27, Kazuya *et al.*) and an air blowing direction changeable means provided between the plurality of air blowing devices and the plasma display panel (Figure 2, Oono) so that, during the aging (paragraph 23, Shinji *et al.*), the air blowing direction changeable means changes directions of air blown from the plurality of air blowing devices (Figure 2, Oono). The reason to combine is the same as found in claim 1.

~~1.1~~ Regarding claims 4 and 9, the combination of Shinji *et al.*, Oono, and Kazuya *et al.* disclose the aging method and device of a plasma display panel according to claims 1 and 6, wherein the air blowing means includes a plurality of air blowing devices (27, paragraph 33, Kazuya *et al.*) so that, during the aging, at least one of the plurality of air blowing devices is moved (paragraph 24, Kazuya *et al.*). The motivation to combine is the same as in claim 1.

~~1.2~~ Regarding claims 5 and 10, the combination of Shinji *et al.*, Oono, and Kazuya *et al.* disclose the aging method and device of a plasma display panel according to claims 1 and 6, wherein the air blowing means includes a plurality of air blowing devices (27, paragraph 33, Kazuya *et al.*) so that, during the aging, at least one of the plurality of air blowing devices changes in a direction (drawings 1 and 2, Kazuya *et al.*). The motivation to combines is the same as found in claim 1.

1.3 Regarding claims 11 and 13, the combination of Shinji *et al.*, Oono, and Kazuya *et al.* make obvious the aging method and aging device of a PDP according to claims 1 and 6, wherein the cooling of the plasma display panel during the aging includes changing the direction of air blown from the air blowing means from a first direction to at least a second direction (paragraph 33, Figures 1 and 2 of Kazuya *et al.*). The fans cool the circuit boards while rotating around the shaft. At the time of the invention, it would have been obvious to one of ordinary skill in the art to change the direction of the air from the air-blowing means in order to uniformly cool the PDP paragraph 25, Kazuya *et al.*)

1.4 Regarding claims 12 and 14, the combination of Shinji *et al.*, Oono, and Kazuya *et al.* make obvious the aging method and aging device of a PDP according to claims 1 and 6, wherein the cooling of the plasma display panel during the aging includes changing the amount of air blown from the air blowing means by at least one additional amount (Drawing 2, blown density is controlled, Oono). At the time the invention was made, it would have been obvious to a person having ordinary skill in the art to change the amount of air blown from the air-blowing means in order to better cool the panel so as to prevent cracks from forming in the panel.

Response to Arguments

1.5 Applicant's arguments filed 11/18/2009 have been fully considered but they are not persuasive.

1.6 Applicant argues that Oono does not disclose or suggest positioning the air blowing means above a front-face surface of the plasma display panel to direct air to the front-face surface in a direction away from parallel relative to the front-face surface, that Kazuya *et al.* do not disclose or suggest positioning the air blowing means above a front-face surface of a plasma display panel to direct air to the front-face surface in a direction away from parallel relative to the front-face surface, and that modifying the references of Oono and Kazuya *et al.* so that the fans are positioned above a front-face surface of the circuit boards to direct air in a direction away from parallel, the fan(s) would be rendered inoperable for their intended purpose.

1.7 Examiner disagrees. The intended purpose the fans is to cool the circuit boards. Modifying the fan(s) location so that they are located at above a front-face surface of the boards would not render the fan(s) less operable for cooling the boards. In fact, Examiner argues that located the fans at above a front-face surface would better achieve the desired goal of cooling the boards. When air is blown from a side position, the portion of the panel farther from the fan is cooled less than the portion nearer to the fan because the air is warmed by the panel. This problem is reduced when the air is blown from above a front-face surface of the PDP.

1.8 Furthermore, Examiner argues that Kazuya *et al.* does disclose that positioning the air blowing means above a front-face surface of a plasma display panel to direct air to the front-face surface in a direction away from parallel relative to the front-face surface. Some of the fans 57 in the case 60 are above a front-face surface of some of the circuit boards 15. Further, by having the fans in the case pivot on shaft 31, the air is directed toward a front-face surface of the boards in a direction other than parallel. This results in cooling the boards uniformly (paragraph 51).

1.9 Beyond this, Shinji *et al.* disclose that fans can be used to cool a PDP during aging. It is well within the skill of a person having ordinary skill in the art to optimize the number of fans, the air direction, the amount of air, and the temperature of the air, among other things, in order to achieve a uniform cooling of the PDP.

Conclusion

2.0 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

2.1 King (US 20030162466 A1) disclose a fan that is above a front-face surface of a CRT (Figure 1).

2.2 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Britt Hanley whose telephone number is (571) 270-3042. The examiner can normally be reached on Monday - Thursday, 6:30a-5:00p ET.

2.3 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571)272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2889

2.4 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Britt Hanley/
Examiner, Art Unit 2889

| /Toan Ton/
Supervisory Patent Examiner, Art Unit 2889